THE INSTITUTE OF PHYSICS

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BULLETIN

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THE WORK OF THE INSTITUTE'S HEADQUARTERS

There are probably few members of the Institute who are aware of the extent and organization of the work of the Institute's Headquarters. The Institute now has about twenty-five full-time staff to deal with what has become a moderate sized business undertaking as well as a busy centre of organization for scientific activities. Responsibility for the administration of all the Institute's work rests, of course, with the Secretary acting on behalf of the Board through the Honorary Treasurer and Honorary Secretary.

In practice the supervision and development of the wide range of Institute activities is broadly divided between the Secretary (Dr. H. R. Lang) and the Deputy Secretary (Mr. N. Clarke). Dr. Lang concerns himself primarily with matters of major policy which require consideration by the Board, contacts with other bodies and government departments, the production of the Institute's scientific journals and books and professional work involving questions of policy. The sides of the Institute's work which are under the control of the Deputy Secretary include membership, education, examinations (including National Certificates and the Institute's new Graduateship examination), the work of the Institute's Branches and Groups, enquiries from members on professional matters (particularly those concerning changes of post and questions on salaries), and the production of the Institute's Bulletin. The division of work in an organization such as the Institute can, of course, be along only broad lines, but it may be helpful to members to have this indication of such a division and to be aware of which of the two permanent officers it would be more appropriate to consult upon any matter that they wish to raise with the Institute.

The Institute now has some 4,000 members with eight Branches and seven subject Groups. For the easy circulation of notices and journals it is necessary to maintain more than 5,500 addressed stencils for members alone. Some members have as many as five separate stencils, as it has proved more efficient to provide a complete and separate set of stencils for each Group; consequently, a change of a member's address, or of his grade of membership, involves the production of at least one, often two, and possibly five new stencils. In addition, a master card index of members' addresses, qualifications, appointments and other particulars is maintained and requires to be modified when any of these details is changed. Approximately 1,800 changes of address or of grade of membership are dealt with each year and about 5,000 record entries are required for the various payments of members; occasionally omissions or mistakes occur, but the number of complaints from members on this score is insignificant. The Institute's records, the circulation of notices and the collection of subscriptions are under the charge of Mr. L. Lawrence.

The development of the publication policy of the Institute has resulted in the creation of a publishing house of considerable size. Some 8,000 copies of the Institute's two scientific journals are despatched each month, 3,500 of these to members and the remainder to retail subscribers in various parts of the world. It is perhaps not realized how widespread is the distribution of these publications. There are more than 800 regular subscriptions from America and 250 from the Soviet Union, and copies are despatched each month to about 40 different countries of the world. As every individual retail subscriber requires a separate record and a separate address stencil, a further problem of maintenance of up-to-date records is created. In addition, there is a steady and growing demand for back runs of the journals from libraries in various parts of the world.

The books published by the Institute are widely advertised, mainly by direct mailing at home and abroad. Nearly 20,000 leaflets describing the new publications were circulated in this country in the spring of this year and the Institute's name as a publishing house is now spreading. Some indication of the success of this work is given by the fact that a substantial number of orders for monographs have already been received from booksellers long before publication dates can be announced. The sale of all the Institute publications is supervised by Mr. T. A. N. Henderson, who has had long experience in the book trade prior to his service with the Institute.

The number of papers submitted to the Institute's journals is now about 300 a year, and in addition some 80 laboratory notes are received. All these are sent to referees and usually some modification of the original paper is required. It is rare for any paper accepted to have diagrams which are in a form suitable for reproduction and therefore much editorial work is involved in the production of new diagrams. A total staff of four deals with the editing of all the Institute's publications,

the day-to-day correspondence concerning editorial work being in the charge of Mr. R. Haresnape.

The educational work of the Institute has grown very greatly in the last few years and the views of the Institute are sought on many occasions by government or public bodies. Its published statements on higher technological education, on the teaching of mathematics, and on the education of physicists have attracted attention and much favourable comment, and the Institute is able, through representation on various bodies, to extend some influence upon various aspects of scientific and technical education. Much clerical work is involved in this work and in the organization of examinations such as those for National Certificates; a further heavy load of secretarial work is created by the many enquiries concerning membership, and the meetings of the Membership Committee itself.

The organization of the scientific meetings and other activities of the Branches and Groups is in itself a substantial section of the Institute's work. There is a small printing machine on the premises which is suitable for the printing of simple notices of meetings, tickets, and so on. In addition more than 60,000 sheets are duplicated in a year's time, including many for the Branches and Groups, some of which prepare memoranda and technical notes of various kinds for their members.

Many members will be aware of the facilities which the Institute now has for the provision of refreshments at its meetings and conferences. The Board has been fortunate in having Mr. and Mrs. Ryder as resident caretakers, Mrs. Ryder also being responsible for the canteen. From very modest beginnings the canteen has now grown to an extent where it is possible to provide buffet lunch at conferences for up to 100 people, suppers and light meals for social evenings and, on occasions, dinners and formal lunches. In addition lunch is provided each day for the staff.

With an organization whose functions are as varied as those of the Institute a great deal depends upon the calibre and willingness of each member of the staff. As Dr. Lang and Mr. Clarke spend much of their time either interviewing members or attending meetings of Institute or other committees, considerable responsibility for the day-to-day routine work must rest upon other members of the staff and the Institute has been fortunate in those who have served it. It has been the Board's policy to provide within the Institute conditions appropriate to a professional body and conducive to the kind of service essential to its work.

MEMBERS OF NOTE

Alan Julian Maddock, D.Sc. (*Chairman, London and Home Counties Branch*). Dr. Maddock is a graduate of the University of Liverpool, obtaining his first degree in 1927, his M.Sc. in 1928, for work on X-ray analysis, and D.Sc. in 1947. His professional experience has included service with the British Thomson-Houston Co. Ltd., Thermal Syndicate Ltd., and Standard Telephones and Cables Ltd., with which company he served eleven years, for the last three as head of an industrial electronics section primarily concerned with radio-frequency heating.

Since 1946 Dr. Maddock has been Head of the Electrical and Electronics departments of the British Scientific Instrument Research Association at Chislehurst, Kent, and he has recently been appointed to the newly created post of Deputy Director of Research of the Association.

Dr. Maddock was elected to Associateship of the Institute in 1930 and to Fellowship in 1936. In 1942 he became honorary secretary of the Electronics Group, which had then recently been formed, and he continued in that office until 1948. From 1945–48 he served as a member of the Board of the Institute and in 1950 was elected Chairman of the London and Home Counties Branch with, again, a seat on the Board.

Dr. Maddock is also a Member of the Institution of Electrical Engineers. He is 45 years of age.

Francis Arthur Vick, O.B.E., B.Sc., Ph.D. Professor Vick was born in 1911. He is a graduate of the University of Birmingham and at the outbreak of war was on the staff of University College, London, and carrying on research on the electrical properties of thin adsorbed layers. Joining the Ministry of Supply in 1939, he became assistant director of research in charge of general physics and was awarded the O.B.E. In 1944 Dr. Vick joined the staff of the University of Manchester, building up there a research team investigating fundamental

problems of thermionic emission and the physical properties of oxide-coated cathodes. In 1950 he was appointed professor of physics in the new University College of North Staffordshire and has since been appointed Vice-Principal. His research group will be transferred there from Manchester when buildings are available.

In Manchester, Dr. Vick represented the University and the Institute on many bodies and established many contacts with industry and educational institutions. He was chairman of the Manchester Federation of Scientific Societies, a member of the Manchester Joint Research Council and president of the Manchester branch of the Association of University Teachers.

Elected to Associateship of the Institute in 1936 and to Fellowship in 1941, Dr. Vick served as honorary secretary of the Manchester and District Branch from 1945–1948 and as chairman of the Branch from 1949–1951. He was first elected to the Board in 1946 and continued to sit on it until resigning the Branch chairmanship this year. He has given a great deal of service as a member of the Education, Membership and Publication Policy Committees and through the many duties he has undertaken as an Institute representative visiting technical colleges or sitting on other committees. He has also been a member of the committee of the Electronics Group.

Professor Vick is an Associate Member of the Institution of Electrical Engineers.

NOTICES TO MEMBERS

Vacuum Physics

The papers presented at the Midland Branch Symposium on Vacuum Physics in June 1950 are being published this month as the first supplement to the *Journal of Scientific Instruments*. All members and others who regularly take this journal will receive free a paper-bound copy of the supplement. It is also available in stiff board covers at 15s.

The supplement contains eleven papers with the edited discussion upon them and subject and name indexes. Sixty-two line and sixteen half-tone illustrations are included.

Interview Panel of Membership Committee

Mr. F. Y. Poynton (Fellow) retired on September 30th after serving his three-year period as one of the two permanent members of the Interview Panel of the Membership Committee and an ex-officio member of the committee. The Board wishes to record its appreciation of the valuable service which Mr. Poynton has given. Professor A. M. Tyndall (Past President) has agreed to act in succession to Mr. Poynton; the other permanent member of the Panel is Mr. A. E. De Barr (Fellow).

Visitors from Abroad

The Institute's officers have been glad to have the opportunity during the summer of entertaining a number of overseas members and other scientists who have been visiting this country and have called at the Institute's House. Among the visitors from the U.S.A. have been Dr. H. A. Barton, Director of the American Institute of Physics, Mr. C. L. Warwick, Executive Secretary of the American Society for Testing Materials, and Dr. W. L. Fink of the Aluminium Company of America. The Institute is grateful to Dr. Barton, in particular, for the help which he has given on numerous occasions to members visiting the U.S.A.; the contacts between the two bodies are close and the relationship has always been most cordial.

A number of Australian members have been visiting this country and have called at Belgrave Square. Among them have been Professor E. O. Hercus (University of Melbourne), Professor A. D. Ross (University of Western Australia), Mr. F. J. Lehany (National Standards Laboratory), and Dr. F. W. G. White (Australian Council for Scientific and Industrial Research).

We do not rely too much on experts. We have to apply some common sense.

ERNEST BEVIN

APPOINTMENTS VACANT

The inclusion of particulars of a vacancy must not be taken to imply that the Institute necessarily approves of the terms offered or that might be offered. Candidates should satisfy themselves that these are satisfactory, and they may always refer to the Institute for advice.

Physicist required urgently to take responsible position in a team engaged upon new and important development in thermionic values. Applicant must have a good physics degree and some experience of vacuum techniques would be an advantage. An analytical approach will be required to problems of mechanical resonance and stresses under shock conditions in small structures. A quick brain and initiative will be important factors assessed at the interview. Excellent prospects and a salary commensurate with the status of the position and qualifications of the applicant awaits a man between about 27–35 keen on applied research. Applications in writing to the Personnel Officer, **Standard Telephones and Cables Limited**, Brimar Valve Works, Footscray, Kent.

Physicists required for interesting work in the following fields:—

(1) Application of new materials to electronic engineering.
(2) Cathode-ray tube development.
(3) Properties of magnetic materials and applications to magnetic tape recording.
(4) Electronic engineering problems, including microwave applications.

The posts are for permanent pensionable staff and carry good salary and prospects. Applicants should have a sound theoretical training with a degree or equivalent and experience in one of these fields, and should write giving full details and quoting ED/35, to Personnel Department, **E.M.I. Engineering Development Limited**, Hayes, Middlesex.

Vacuum Physics Laboratory requires **engineers** or **physicists** experienced in development of special valves for radar applications at microwave frequencies, particularly magnetrons, TR cells or klystrons. Openings include senior positions for suitable applicants offering good opportunities for advancement. Apply quoting "VPL" and give full details of training, qualifications and experience and salary expected, to the Personnel Office, **Ferranti Limited**, Ferry Road, Edinburgh.

Electrical Engineers and **Physicists** are invited by the **Ministry of Supply** to apply for the following appointments in the Scientific Officer class at a Research and Development Establishment near London.

Senior Scientific Officer.

(1) **Electrical Engineers** (2) with special qualifications in radio communications and experience in the engineering of development prototypes. Ref. D.390/51A.

(2) **Physicist** with experience in electronic circuitry for research into the measurement of high speed transients. Ref. A.245/51A.

(3) **Physicist** with experience of optical and electronic techniques, and with an interest in fluid mechanics, for work on aerodynamical problems including wind tunnel investigations. Ref. A.246/51A.

Scientific Officer.

(4) **Electrical Engineer** or **Physicist** with interest in the application of electronic methods to optical instrumentation techniques. Ref. D.392/51A.

(5) **Electrical Engineer** or **Physicist** for work on high speed electronic calculating machine. Ref. D.391/51A.

Candidates should possess a 1st or 2nd class honours degree in physics or electrical engineering or equivalent qualification. For the senior grade the minimum age is 26 and at least 3 years post-graduate research experience is required. For post (1) an engineering apprenticeship or industrial experience would be of advantage. Salary will be determined on age and on an assessment of the successful candidates' qualifications and experience within the ranges: Senior Scientific Officer—£720–£910. Scientific Officer—£380–£620. Rates for women somewhat lower. Posts are unestablished but carry benefits under F.S.S.U. Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, W.C.2, quoting appropriate reference number. Closing date 24 October, 1951.

Research Officer (age 23–27) with degree in physics or equivalent for work on full or semi-scale plant, eventually to supervise technical investigations on dust and pulverizing. Works experience desirable, preferably on plant work.

Research Officer (age 23–27) with degree in physics or equivalent and experience in the finer techniques of physical measurement and of electronics desirable.

Commencing salary for both vacancies £400–£500. Superannuation scheme. 5-day week. Apply in writing to the Assistant Secretary, **The British Coal Utilization Research Association**, Randalls Road, Leatherhead, Surrey.

Physicist required by **The British Iron and Steel Research Association** to take charge of the physics section of the Association's South Wales Laboratory in Swansea. Work includes X-ray crystallography, electron diffraction, viscosity of molten metals, and the physics of metal coatings and surface treatment processes generally. Honours degree in physics and some research experience essential. Some administrative experience an advantage. Starting salary within the range £850–£1,050 per annum according to age, qualifications and experience. Post is superannuated under the F.S.S.U. Written applications only to Personnel Officer, B.I.S.R.A., 11 Park Lane, W.1.

Electrical Engineers and **Physicists** are invited by the **Ministry of Supply** to apply for appointments in the Experimental Officer Class at Experimental Establishments near Southend, Carlisle and in South Wales for work connected with out-of-door instrumentation.

(1*a*) **Physicists** or **Electrical Engineers** preferably with some knowledge of experimental range technique and procedure. For some posts a knowledge of electronics or mathematics is required: Ref. A.262/51A.

(1*b*) and for others experience in design of electronic apparatus and interest in technical photography is desirable: Ref. A.263/51A.

(2) **Physicists** with interest in chemistry. Ref. A.264/51A.

(3) **Physicist** with interest in mathematics, to examine experimental records obtained during trials. Ref. A.261/51A.

Minimum acceptable qualification is Higher School Certificate with physics as a principal subject but higher qualifications particularly to degree standard would be of advantage. Salary will be determined according to age, qualifications and experience within the following ranges: Senior Experimental Officer (minimum age 35) £742–£960. Experimental Officer (minimum age 28) £545–£695. Assistant Experimental Officer £240 (at age 18) to £505. Rates for women somewhat lower. The posts are unestablished. Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, London, W.C.2, quoting the appropriate reference number. Closing date 24 November, 1951.

Royal Air Force Institute of Aviation Medicine, South Farnborough, **Bio-physicist**: The Civil Service Commissioners invite applications from men for a permanent appointment as Principal Scientific Officer.

Candidates must have been born on or before 1 August, 1920. They must possess first or second class honours degrees, and have had research experience in general physics and some experience in the application of physics to physiological problems.

Inclusive salary scale £960–£1,295. Superannuation provision under the Federated Superannuation System for Universities.

Further particulars and application forms from Civil Service Commission, Scientific Branch, Trinidad House, Old Burlington Street, London, W.1, quoting No. S 4077/51. Completed application forms must be returned by 8 November, 1951.

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